

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE**NATIONAL REGISTER OF HISTORIC PLACES
INVENTORY -- NOMINATION FORM**

FOR FEDERAL PROPERTIES

FOR NPS USE ONLY

RECEIVED

FEB

4 1986

DATE ENTERED

MAR 21 1986

SEE INSTRUCTIONS IN HOW TO COMPLETE NATIONAL REGISTER FORMS
TYPE ALL ENTRIES -- COMPLETE APPLICABLE SECTIONS**1 NAME**

HISTORIC

Willow Beach Gauging Station

AND/OR COMMON

Willow Beach Gauging Station

2 LOCATION

STREET & NUMBER

Not applicable (Lake Mead Nat'l Recreation Area) N/A NOT FOR PUBLICATION

CITY, TOWN

Not applicable

CONGRESSIONAL DISTRICT

☒ VICINITY OF

Boulder City Second and Third

STATE

Nevada and Arizona

CODE

32 & 04

COUNTY

Clark and Mohave

CODE

003 & 015

3 CLASSIFICATION**CATEGORY****OWNERSHIP****STATUS****PRESENT USE**

N/A DISTRICT

☒ PUBLIC

N/A OCCUPIED

N/A AGRICULTURE N/A MUSEUM

☒ BUILDING(S)

N/A PRIVATE

☒ UNOCCUPIEDN/A COMMERCIAL ☒ PARK☒ STRUCTURE

N/A BOTH

N/A WORK IN PROGRESS

N/A EDUCATIONAL N/A PRIVATE RESIDENCE

N/A SITE

PUBLIC ACQUISITION**ACCESSIBLE**

N/A ENTERTAINMENT N/A RELIGIOUS

N/A OBJECT

N/A IN PROCESS

☒ YES: RESTRICTED

N/A GOVERNMENT N/A SCIENTIFIC

N/A BEING CONSIDERED

N/A YES: UNRESTRICTED

N/A INDUSTRIAL N/A TRANSPORTATION

N/A NO

N/A MILITARY N/A OTHER

4 AGENCY

REGIONAL HEADQUARTERS: (If applicable)

National Park Service - Western Regional Office

STREET & NUMBER

450 Golden Gate Avenue - Box 36063

CITY, TOWN

San Francisco

N/A VICINITY OF

STATE

California (94102)

5 LOCATION OF LEGAL DESCRIPTION

COURTHOUSE,

REGISTRY OF DEEDS, ETC.

Lake Mead National Recreation Area headquarters

STREET & NUMBER

601 Nevada Highway

CITY, TOWN

Boulder City

STATE

Nevada

6 REPRESENTATION IN EXISTING SURVEYS

TITLE

List of Classified Structures, Lake Mead National Recreation Area

DATE

1976

☒ FEDERAL ☒ STATE ☒ COUNTY ☒ LOCALDEPOSITORY FOR
SURVEY RECORDS

National Park Service - Western Regional Office

CITY, TOWN

San Francisco

STATE

California

7 DESCRIPTION

CONDITION

CHECK ONE

CHECK ONE

N/A EXCELLENT
N/A GOOD
N/A FAIR

☒ DETERIORATED
N/A RUINS
N/A UNEXPOSED

☒ UNALTERED
N/A ALTERED

☒ ORIGINAL SITE
N/A MOVED DATE N/A

DESCRIBE THE PRESENT AND ORIGINAL (IF KNOWN) PHYSICAL APPEARANCE

The Willow Beach Gauging Station, its cable tramway, and its catwalk and trail approach, are located in the steep-walled Black Canyon of the Colorado River downstream from Boulder Dam, whose operation it served by measuring the flow of the Colorado River in the canyon below the dam. Originally the gauging station consisted of two gauging stations, both on the Nevada (west) side of the Colorado River, connected by bucket tramway cars hanging from cables across the river, which met on the Arizona side a combination of trail, catwalk hung from the wall of the canyon, and a third cable tramway across a side canyon, which extended southward along the Arizona side of the river to a residence and garage for the resident engineers. The residence and garage have been demolished, leaving only the terraced hillside with stone retaining walls on which they once stood. The lower gauging station and downstream tramway across the Colorado River also are gone. The remaining structures which are deemed to possess integrity, include the upstream gauging station, the cable tramway across the river from the gauging station to the trail, the trail along the Arizona side, the deteriorated but intact catwalk along the cliff, the trail south of the catwalk, the cable tramway across the side canyon on the Arizona side, the trail south of the catwalk to the residence site, and the stone retaining walls which mark the site of the residence and garage, which were approximately one and two thirds miles, as a crow flies, upstream from Willow Beach

The gauging station itself consists of a small, square, shed-roofed metal room hung on a vertical cliff about forty to fifty feet above the surface of the river, whose level varies according to volume of flow. Beneath it, a corrugated pipe about four feet in diameter extends vertically from its floor into the water. The lower two thirds of the pipe above the water, and presumably all below, is connected not only to the cliff by metal supports, but shielded by solid concrete which prevents the water from passing between the pipe and the cliff and tearing it out. Above this concrete diverter, the gauging station is held to the cliff only by metal supports. The metal gauging room has three small four-lite windows, one next to the cliff on its north side, one on the north or upstream edge of the side which faces across the river, and one on the canyon wall or western edge of the side which faces downstream. On the outer edge of the south wall is a doorway, and along the entire south side of the gauging room is a porch. From that porch, a metal ladder leads upstairs to a flat platform with railing, mounted several feet above the shed roof of the gauging room. Near the canyon wall, another platform is mounted 1 story below the gauging room porch, which allows transfer from a ladder which leads down from that porch to the main ladder which is mounted near the corrugated pipe, and leads down to near the surface of the water. The gauging station may be approached either by boat and ladder from below, or by cable tramway to the platform above. The tramway consists of a flat, shallow rectangular bucket hung by steel supports at each of its four corners from a pair of pulleys, one at each end, suspended from a single cable suspended across the river. From the east (Arizona) terminus of the cable tramway, a combination of trail along the edge of the cliff, a catwalk of wooden planks laid on steel supports driven into the cliff, with a railing of metal supports and metal cable along its outer edge, more trail, another cable tramway across a side canyon similar to the one described, and more trail, leads southward a distance slightly more than a mile to the site of the residence and garage, marked today only by concrete foundations and rubble retaining walls. The cable of a second tramway across the river to the second gauging facility (now gone), is still in place.

8 SIGNIFICANCE

PERIOD	AREAS OF SIGNIFICANCE -- CHECK AND JUSTIFY BELOW			
N/ A PREHISTORIC	N/ A ARCHAEOLOGY-PREHISTORIC	N/ A COMMUNITY PLANNING	N/ A LANDSCAPE ARCHITECTURE	N/ A RELIGION
N/ A 1400-1499	N/ A ARCHAEOLOGY-HISTORIC	N/ A CONSERVATION	N/ A LAW	N/ A SCIENCE
N/ A 1500-1599	N/ A AGRICULTURE	N/ A ECONOMICS	N/ A LITERATURE	N/ A SCULPTURE
N/ A 1600-1699	N/ A ARCHITECTURE	N/ A EDUCATION	N/ A MILITARY	N/ A SOCIAL/HUMANITARIAN
N/ A 1700-1799	N/ A ART	<input checked="" type="checkbox"/> ENGINEERING	N/ A MUSIC	N/ A THEATER
N/ A 1800-1899	N/ A COMMERCE	N/ A EXPLORATION/SETTLEMENT	N/ A PHILOSOPHY	N/ A TRANSPORTATION
<input checked="" type="checkbox"/> 1900-	N/ A COMMUNICATIONS	N/ A INDUSTRY	N/ A POLITICS/GOVERNMENT	N/ A OTHER (SPECIFY)
		N/ A INVENTION		

SPECIFIC DATES 1931-1939

BUILDER/ARCHITECT U.S. Geological Survey

STATEMENT OF SIGNIFICANCE

The Willow Beach Gauging Station and its ancillary structures were erected to provide data on the flow of the Colorado River downstream from Boulder Dam after its completion in 1935. As such, the Willow Beach Gauging Station is a part of a complex of facilities which relate to the history of construction and operation of a nationally significant dam erected for flood control and irrigation purposes and, secondarily, to supply hydroelectric power. The Willow Beach Gauging Station contributed in its small way to the initial years of operation of this historic dam. It is also of local significance in engineering in its own right as reflected by its construction, hanging from the precipitous, vertical wall of the Black Canyon of the Colorado River, and its difficult access by cable tramway and catwalk hung from the canyon walls.

Reconnaissance to locate the site for a gauging station below the site of the new dam whose construction was just beginning was undertaken in 1931 by District Engineer W.E. Dickinson along with J.C. Hoyt, of the U.S. Geological Survey, and O.G. Patch, of the Bureau of Reclamation. Actual construction under the supervision of J.A. Baumgartner of the U.S. Geological Survey occurred in two phases, from January to July, 1934, and November 1934 to July 1935. Once completed, resident engineers at the gauging station were W.L. Heckler and W. E. Dail. The station operated until October 1939, when it was replaced by a new station closer to the dam (.8 mile downstream).

9 MAJOR BIBLIOGRAPHICAL REFERENCES

Letter, E.B. Hodges for H.M. Babcock, District Chief, Water Resources Division, U.S. Geological Survey, Tucson, Arizona, April 7, 1976, to Gordon Chappell Regional Historian, U.S. National Park Service Western Region, San Francisco
Simmons, Ralph B., Boulder Dam and the Great Southwest. (Los Angeles: The Pacific Publishers, 1936).

10 GEOGRAPHICAL DATA

ACREAGE OF NOMINATED PROPERTY 117.08

UTM REFERENCES

ZONE	EASTING	NORTHING
A 11	708250	3974400
B 11	708750	3974400
C 11	710100	3973300
D 11	709600	3973250

VERBAL BOUNDARY DESCRIPTION

The boundary is a parallelogram centered on the Colorado River and extending from about an fourth of a mile upstream from the gauging station located on the Nevada (western) side to about an eighth of a mile south of the foundations and retaining walls of the ranger station located on the Arizona side, and parallel to the river in the Black Canyon, so that the boundary straddles the river, and the state line, its corners indicated by UTM coordinates above.

LIST ALL STATES AND COUNTIES FOR PROPERTIES OVERLAPPING STATE OR COUNTY BOUNDARIES

STATE	CODE	COUNTY	CODE
Nevada	32	Clark	003
Arizona	04	Mohave	015

11 FORM PREPARED BY

NAME / TITLE F. Ross Holland, Jr., Historian;
Revised form by Gordon Chappell, Regional Historian

ORGANIZATION	DATE
National Park Service - Western Regional Office	March 14, 1983
STREET & NUMBER	TELEPHONE
450 Golden Gate Avenue - Box 36063	(415) 556-4165
CITY OR TOWN	STATE
San Francisco	California (94102)

12 CERTIFICATION OF NOMINATION

STATE HISTORIC PRESERVATION OFFICER RECOMMENDATION

YES ☒

NO ☐

NONE ☐

STATE HISTORIC PRESERVATION OFFICER SIGNATURE

In compliance with Executive Order 11593, I hereby nominate this property to the National Register, certifying that the State Historic Preservation Officer has been allowed 90 days in which to present the nomination to the State Review Board and to evaluate its significance. The evaluated level of significance is ☒ National ☐ State ☒ Local.

FEDERAL REPRESENTATIVE SIGNATURE Edmund O. Brennan

TITLE Chief Historian, National Park Service DATE January 20, 1986

FOR NPS USE ONLY

I HEREBY CERTIFY THAT THIS PROPERTY IS INCLUDED IN THE NATIONAL REGISTER

Linda R. Clelland

DATE 3/21/86

DIRECTOR, OFFICE OF ARCHEOLOGY AND HISTORIC PRESERVATION

ATTEST:

DATE

KEEPER OF THE NATIONAL REGISTER

**United States Department of the Interior
National Park Service**

**National Register of Historic Places
Inventory—Nomination Form**

For NPS use only

received

date entered

Continuation sheet

Item number 8

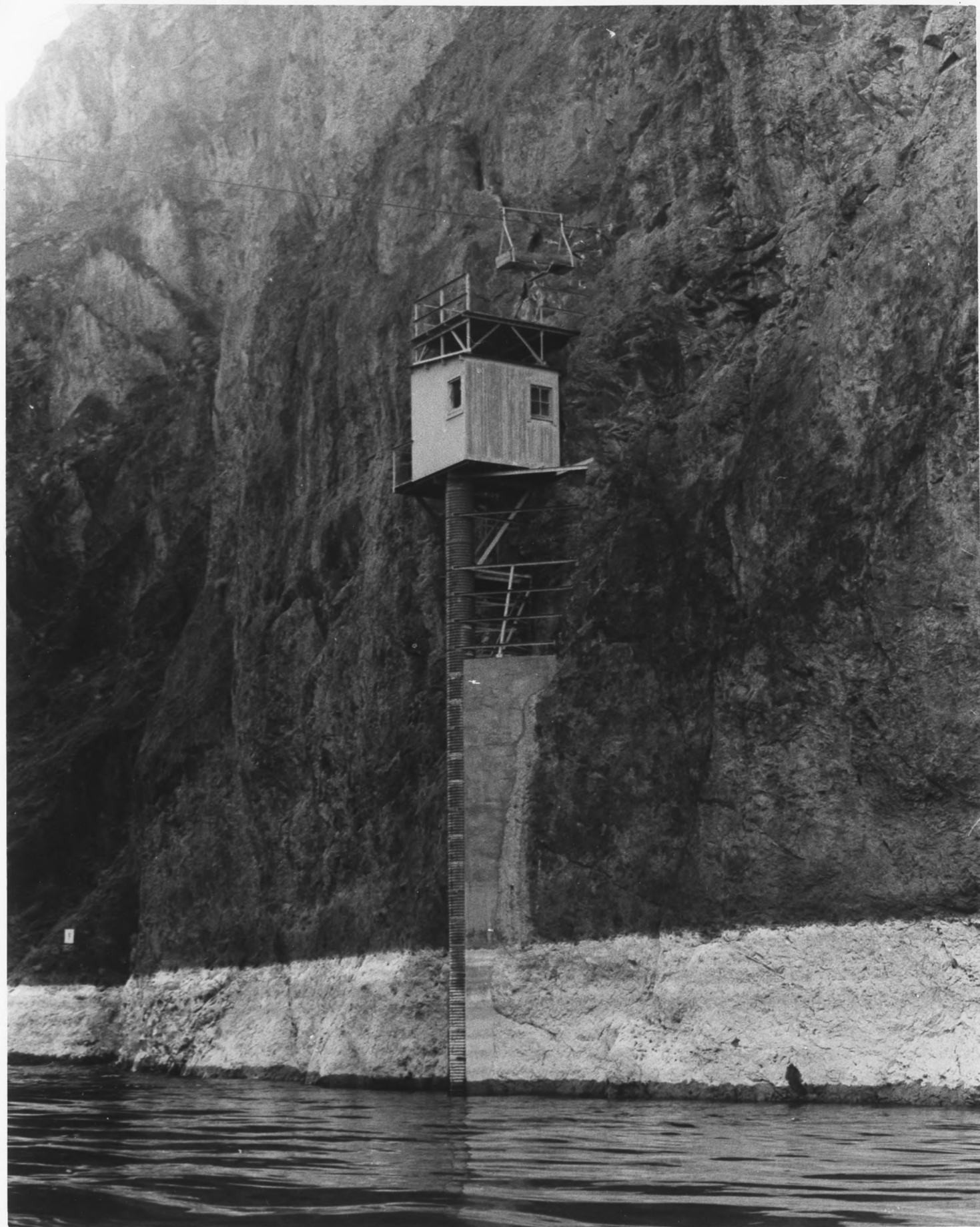
Page 2

Context

The historical context for this form is, locally and regionally, the construction of Hoover (later renamed Boulder) Dam, and beyond that, the construction of all Federal water projects along the Colorado River and its tributaries, throughout the West, and throughout the nation. No contextual studies of these resources have been done, and the problem is complicated by multi-agency responsibility. The Bureau of Reclamation or the Bureau of Water and Power Resources is reported to have some cultural studies which may or may not provide contextual background for Boulder Dam and its associated resources such as the Willow Beach Gauging Station, but the author of this form has so far not succeeded in obtaining a copy or copies.

In terms of the history of Boulder Dam itself, twenty-three articles in an industry magazine, Compressed Air Magazine, published during the 1930s, have been collected into a book entitled The Story of Hoover Dam and published by Nevada Publications. This provides some contextual data local in character. Reference to that volume is recommended for contextual background on the dam. A 78-page pamphlet of the same title, listing no author and published in 1976 by the Bureau of Reclamation, is more a public relations puff piece extolling the benefits of the dam than serious history. Ralph Simmons' 1936 book, Boulder Dam and the Great Southwest, is similarly flawed, but does provide some historical data. But in terms of true contextual data, no such research has been done and it is beyond the legal and fiscal authority of the National Park Service to research resources managed by other agencies.

Clearly, Boulder Dam was and is of national historical significance as one of the major Federal water projects in the nation's history, and the Governor of Nevada has recommended a National Historic Landmark study to encompass not just the dam but all associated resources, which presumably would include the Willow Beach Gauging Station.



Willow Beach Gauging Station

LAKE MEAD NATIONAL RECREATION AREA,
CLARK COUNTY, NEVADA

PHOTO BY F. ROSS HOLLAND, JR.

DECEMBER 1971

**Negative at National Park Service
Western Regional Office
San Francisco, California** ✓

VIEW FROM NORTHEAST OF GAUGING
STATION AND CABLE TRAMWAY

PHOTO 1 OF 5



WILLOW BEACH GAUGING STATION

LAKE MEAD NATIONAL RECREATION AREA,
CLARK COUNTY, NEVADA

Photo by
Gordon Chappell

MARCH 1976

Negative at National Park Service
Western Regional Office
San Francisco, California

VIEW FROM SOUTHEAST OF GAUGING STATION

PHOTO 2 OF 5



CATWALK

WILLOW BEACH GAUGING STATION

LAKE MEAD NATIONAL RECREATION AREA, MOHAVE COUNTY,
ARIZONA

PHOTO BY F. ROSS HOLLAND, JR,

DECEMBER 1971

**Negative at National Park Service
Western Regional Office
San Francisco, California**

VIEW SOUTHEAST OF CATWALK IN THE BLACK CANYON
OF THE COLORADO RIVER

PHOTO 3 OF 5



CATWALK

WILLOW BEACH GAUGING STATION

LAKE MEAD NATIONAL RECREATION AREA
MOHAVE COUNTY, ARIZONA

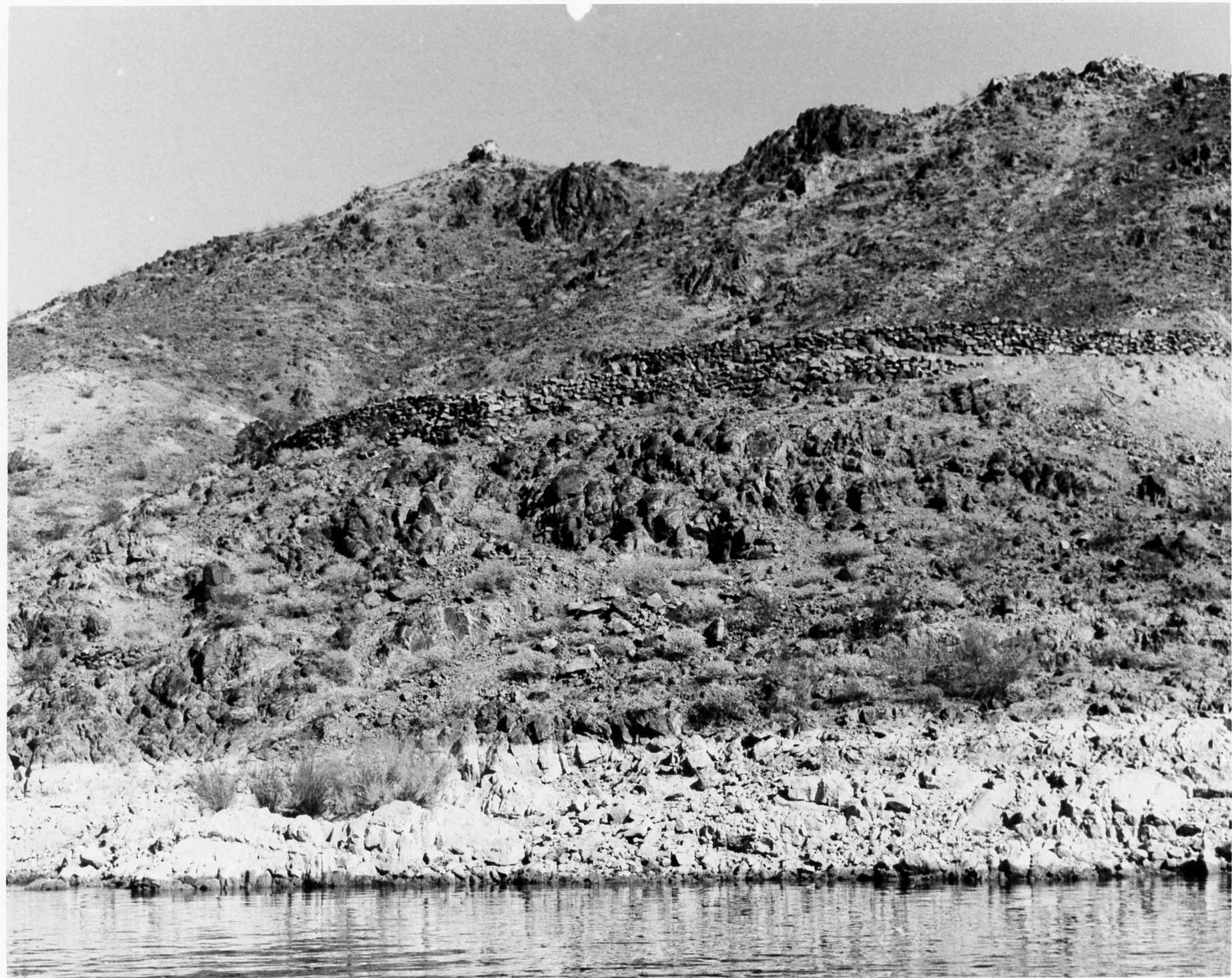
PHOTO BY DR. WILLIAM TWEED

MARCH, 1976

Negative at National Park Service
Western Regional Office
San Francisco, California

VIEW SOUTH ALONG CATWALK ABOVE
COLORADO RIVER

PHOTO 4 OF 5



SITE OF RESIDENCE

WILLOW BEACH GAUGING STATION

LAKE MEAD NATIONAL RECREATION AREA, MOHAVE COUNTY,
ARIZONA

PHOTO BY F. ROSS HOLLAND, JR.

DECEMBER 1971

**Negative at National Park Service
Western Regional Office
San Francisco, California**

VIEW EAST SHOWING RUBBLE TERRACES AT SITE
OF RESIDENCE - COLORADO RIVER IN FOREGROUND

PHOTO 5 OF 5